

S. of Hills - 5/17 1917.

Homestead 5/19 "

Park. 5/24 "

Brighton, 5/25 "

Mason City 5/26 "

Shelby 5/27 1917

" 6/8-10 "

Mason City 6/18 "

Wilton to
Moscow, 6/28 1917

Homestead, July "

Eldora - 7/31 "

Portville to
Waukon, 8/11 1917

Waukon to 8/12 "

New Albion 8/2-13

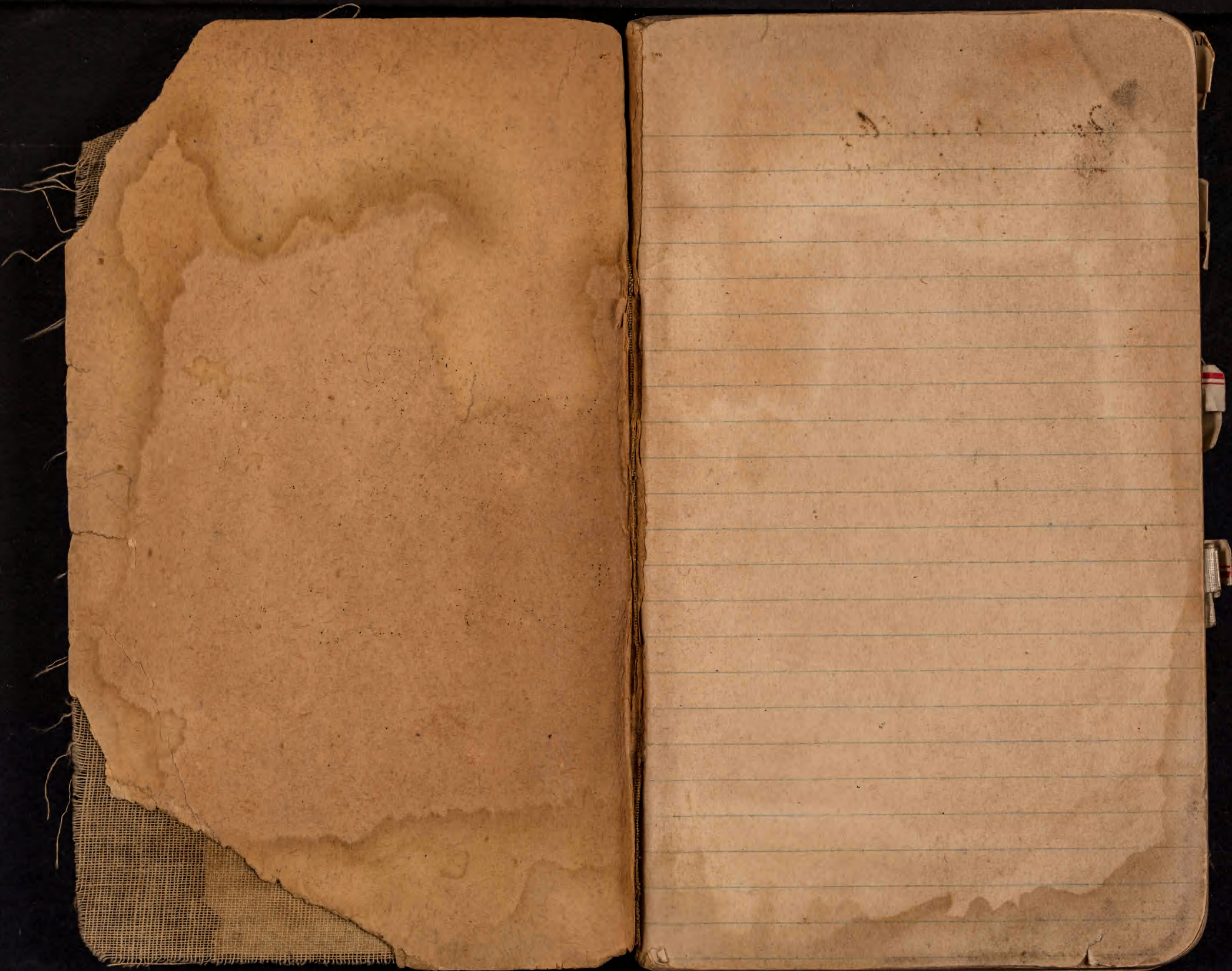
Waukon to Portville 8/14 "

Mechanicsville 8/12 1917

Labula 6/13 "

Muscataine to
Wilton 6/17 "

Burlington 6/18 "



16.00

45.00

8.24

569.24

Sheldon 25.00

Maple 25.00

Wentworth 25.00

\$144.24

Live Grinnell

10; 27 -

11; 55

12.25

1.52

DEPARTMENT OF BOTANY
B. SHIMEK
HEAD OF DEPARTMENT

THE STATE UNIVERSITY OF IOWA
IOWA CITY, IOWA

○ = elm -
 X = Birch

Brick

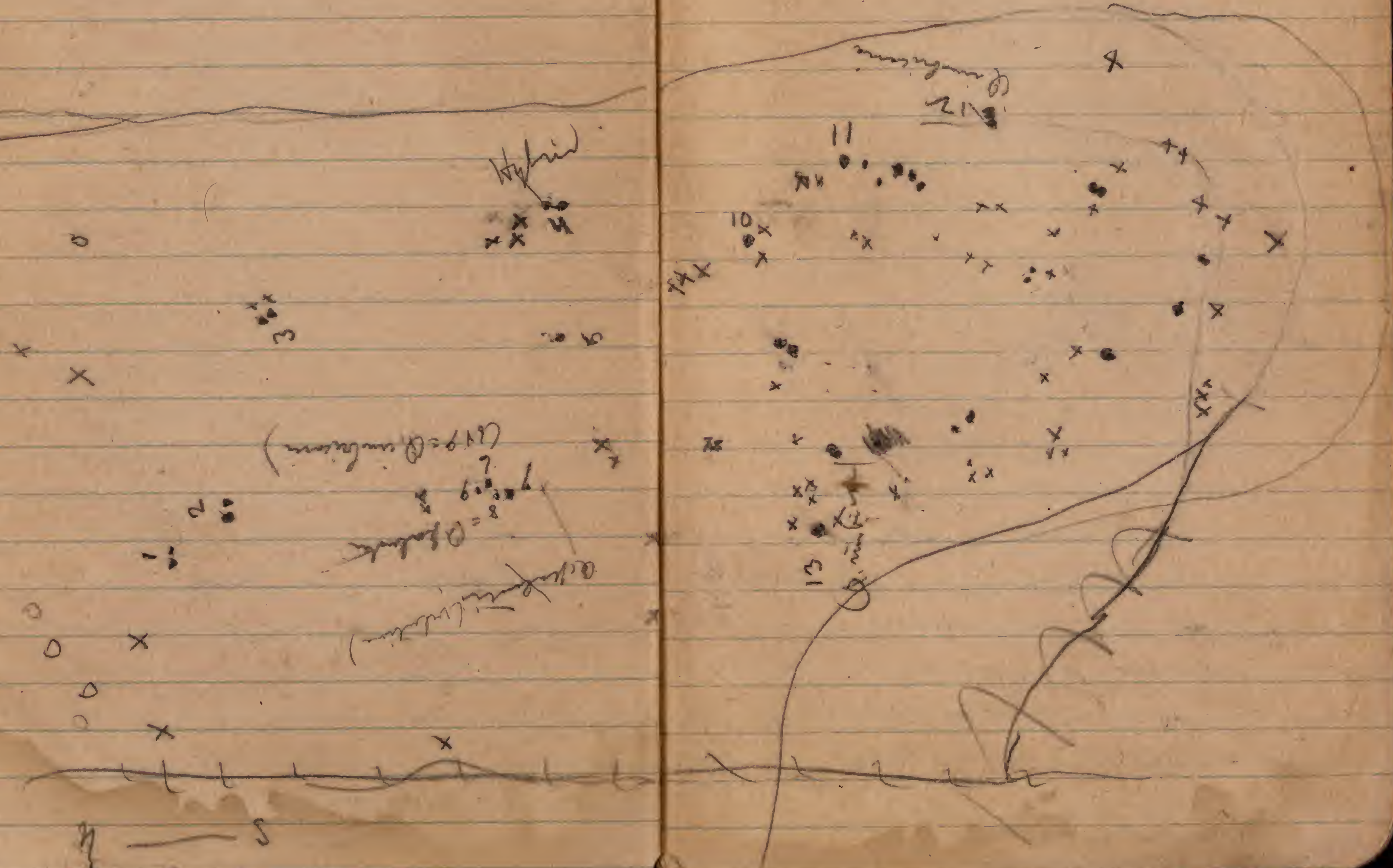
Hybrid

(all 9 = *Q. imbricaria*)

8 = *Q. palustris*

Q. macrocarpa (intermedia)

○ = *Q. imbricaria*
 X = *Q. macrocarpa*



S. of Hills

May 17, 1917

Oak (hybrid) 4 - East tree,

no. 1 - half way up E. side of
(vine) crown.

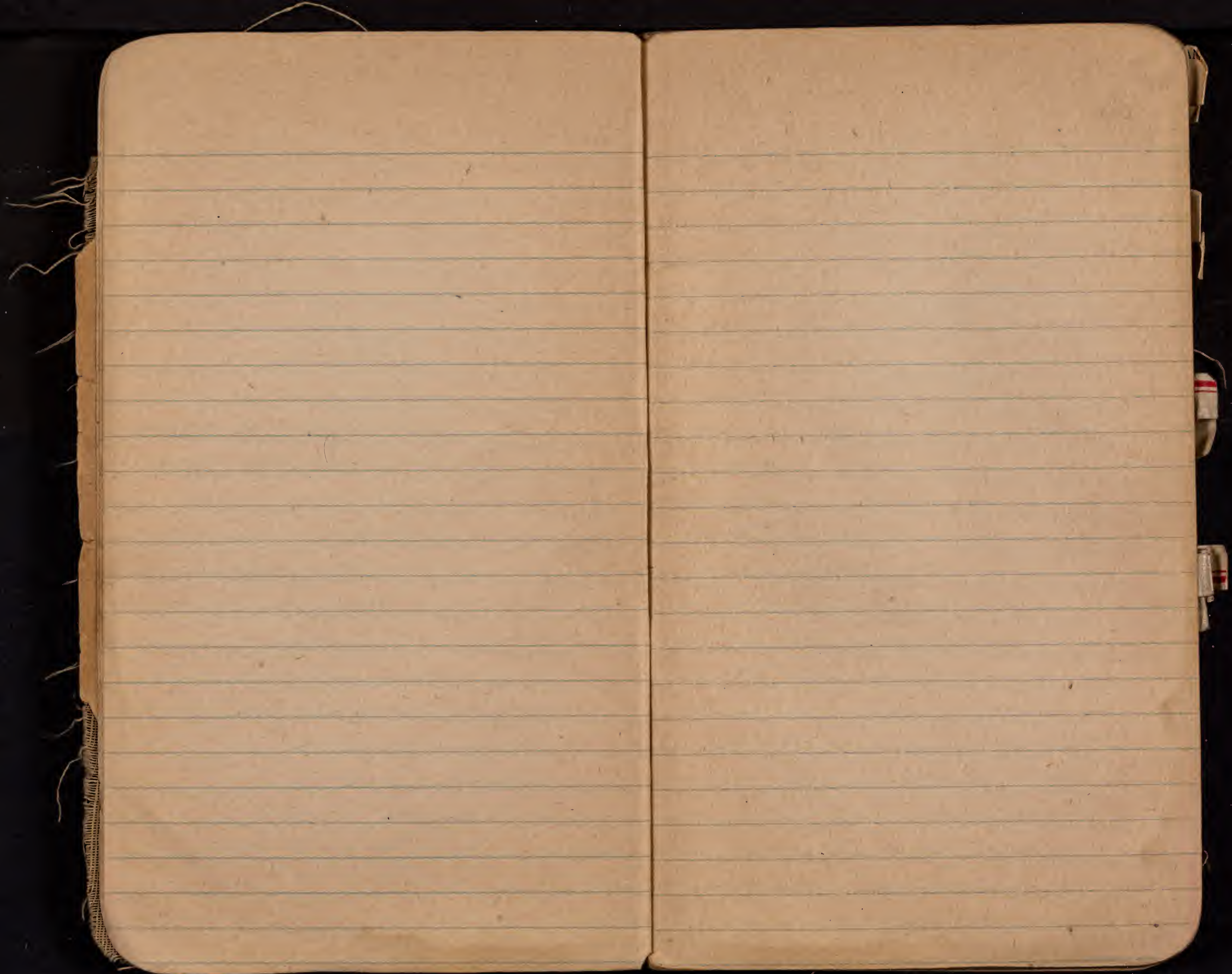
no. 2 - at bottom E. side of crown
(vine)

Oak 12 *Q. imbricaria*
only pistillate flower - low

no. 3 (vine) oak 7 -
Q. palustris -

5 - (vine) Oak 13 *Q. imbricaria*
(all staminate, nearly)
1/2 way up crown, S.W. side.

6 - (vine) base of crown (13)

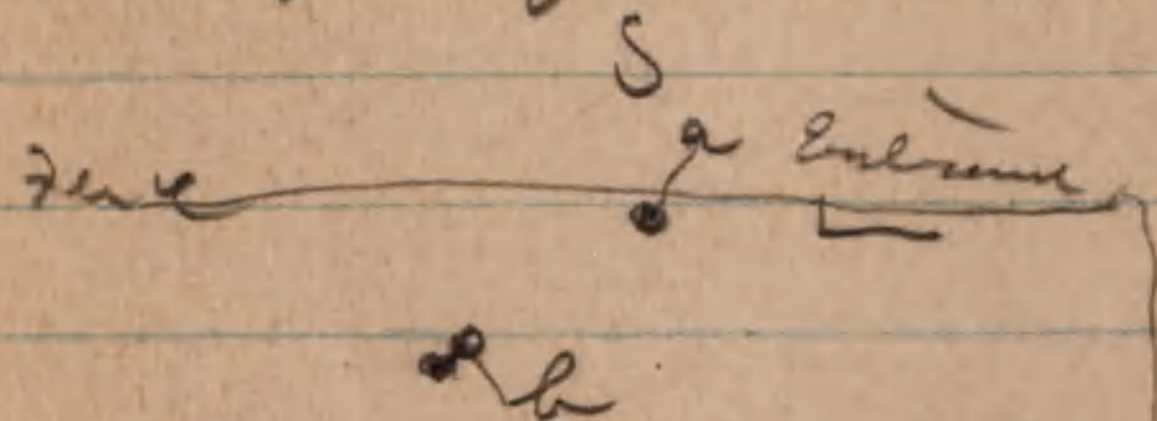


Homestead, N. May 19/1917

Left for Homestead at 7⁴⁵ am,
with 14 students

Went to pond & found algae
abundant.

Took fls. of oak - near pond.



a = *Q. velutina*

b = *Q. rubra*

n

(c) Went to gate on N. side pasture
opp. station - 1st double oak w.
of gate (N. of road) has large
cups - *Q. velutina*
marked (C.)

upland, woods
~~white oak~~
Q. velutina
Q. rubra
Q. macrocarpa
Carya
White Hickory
Q. alba
Iris
Basswood,
elm
Red Elm
Prunus virginiana
Viburnum lentum
Ribes gracile
Spiraea
elm
Populus tremuloides
Prunus americana
Cornus paniculata
Corylus
Rosa
Blackberry
Rosa blanda
Vitis rotundifolia
Prunus virginiana
Rosa chinensis
Ribes occidentalis
Crataegus marshallii
Cladonia

Gleditsia
Honey Locust
Pyrus
Wild Cherry
Crataegus mollis
Ribes cynosbati
Populus grandidentata
Ostrya virginica
Eriogonum
Black Birch,
Salix minor
" amygdaloides
" longifolia
Juglans
Butter nut
Carya
Hickory

Cornus
Rosa
Iris
Rosa

Sandy msc. - N.E. of house

~~Erigeron~~

Ranunculus fascicularis

Salix humilis

Oxalis violacea

Heuchera hispida

Potentilla canadensis

Viola pedata

Hypoxis hirsuta

~~Antennaria plantaginifolia~~

Achillea millefolium

~~Geranium umbellata~~

~~Thymus virginicus~~

~~Zaraxanthus~~
~~Bandula~~ ~~Thymus~~

Krinn superba

Viola (pavilion)

Lithospermum canescens

Tradescantia (reflexa)

Artemisia canadensis

Prunella vulgaris

Corynephorus

~~Delphinium~~

~~Heuchera~~

Panicum tenuifolium

Panicum virgatum

Eryngium yuccifolium

Ranunculus abortivus

Tragium virginicum

Rumex crispus

Helianthemum virginicum

Antennaria plantaginifolia

Panicum Scribnerianum

Cachrys

Poa compressa

Antennaria ^{neglecta} ~~virginica~~

Potentilla canadensis

Andropogon scoparius

Solidago rigida

Cephalanthus occidentalis

Polypodium commune

Rudbeckia hirta

Lobelia inflata

Anemone cylindrica

Ruellia strepera

Solidago nemoralis

Comandra umbellata

Thalictrum

~~Thalictrum~~

Rubus occidentalis

~~Panicum virgatum~~
~~Eragrostis sp.~~

My prairie N. of Cinn.
 was very poor.

A few
Viola pedata
Lilium can.

Sisyrinchia

Gysia aurea

Antennaria racemosa

Ranunculus fascicularis

Card. hirsutus fl.

Desmodium illino.

Many flowers in bud.

Very few flowers.

Along road - Prairie

Salix trix

Doxyastrum nutan

Pycnanthemum flexuosum

Cirsium tridentatum

Panicum virgatum

Antennaria plantaginifolia fl.

Solidago rigida

Achillea millefolium

Carex flacca

Momordica

Lepachys pinnata

Everything is backward.

Only a few *Cypripedium*

were seen. *Geranium*

scarce.

C. lyata in prime condition.

The prairie N. of river is

singularly few flowers.

This whole season
has been slow. It
has been cool.

I found *Struthiopteris*
& my *Equisetum* along
road S. of Dutch Lake.

I was surprised to
find the shore banks
W. of the bridge very
dry. *Batrachium* &
Mnium were in fine
fruit & abundant,
but the plants were
shrivelled.

Dicentra was in full
fruit with black seeds.
Dentaria was just out
of flower.

Monarda *Geranium*
Anemone *Anemone*
venosum *Polemonium*
Cypripedium *Carlophyllum*

were in flower in the ^{repland} woods

In the upland openings were
following in flower:

Oxalis violacea

Lithospermum

Comandra (in bud)

Carex pennsylvanica

Viola pedata

Park - May 24-1917

Begin in at SW. cor. of Park

Quercus alba

^{Clay}
White Hickory

Quercus velutina

^{Juglans}
Black Walnut

Quercus rubra

^{Ulmus}
Ash Elm

Ribes gracile

Prunella virginica

Sambucus racemosa

Quercus macrocarpa

Prunus virginiana

^{Fraxinus}
Green Ash

Lilium am.

Prunus serotina

^{Acer}
Hard Maple

Populus tremuloides

Ulmus filix

Crataegus marquette

Carya amara

(*Prunus serotina*)

Prunella virginica

Corylus americana

Crataegus mollis

Upper bank

Q. macrocarpa

Q. rubra

Crataegus marquette

" *mollis*

Q. velutina

Prunus virginiana

^{Ulmus}
Ash Elm

^{Ulmus}
Red Elm

Cornus paniculata

Prunella serotina

^{Gleditsia}
Honey Locust

^{Fraxinus}
Green Ash

^{Betula}
Black Birch

Carya amara

Vitis vulpina

Smilax hispida

Prunus serotina

^{Juglans}
Black Walnut

Lilium am.

Crataegus macrocarpa

Prunus virginiana

Lowest bottom

^{yellow}
Juglans nigra
elm

Vitis vulpina
^{Fraxinus}
elm ash

Betula
Black Birch

Salix nigra

amygdaloides

Crataegus mollis

^{acer}
Burr Elder

Sambucus canadensis

Crataegus Marylandica

^{sand}
Prunus americana

Q. macrocarpa

^{carpal}
Prunus

^{bledder}
Honey locust

Ribes gracile

Salix longifolia

^{acer}
Maple

Platanus occidentalis

^{cellis}
Hackberry

^{almy}
Pisonia

^{copulm}
Cottonwood

(at back of bank)

Brighton, Mason Co. Okla.
May 25. 1917

Left Iowa City at
10³⁰ AM. went via Wilton &
Muscatine. Train stopped
at Brighton.
Learned that large
groves still NW. of
Brighton, along
Shunk, undisturbed.
Delivered address on
"Patriotism and the School."
There were 12 graduates,
6 boys & 6 girls.
4 of the boys - soldiers.
Left at 10 for
Marion City. Rained
all evening.
Took supper at
Oshkosh.

May 26, 1917.

Reached Marion City at 5 AM.
After breakfast Joe went with

me to Big House. On
W. side on return located
vabs:

u
|
S
Black oak
Marion City

On open places, E. side found
in flower or fruit:

Lithospermum longipolium
canum

Viburnum dentifidum

Ranunculus fascicularis

Lysichiton

Androsace fr

Castilleja sessiliflora

Draba caroliniana fr.

Poa compressa

Anemone patens, var. fr.

Amelanchier oblongifolia (?)

Ribes gracile

Prunus virginiana - on rocky

Agropyron - on ^{banks} rocks.

Quercus macrocarpa

" " *ellipsoidalis* ?

(From two trees on E. side)

Astragalus caryocarpus

Crataegus mollis

Anemone caroliniana

Comandra umbellata

Oxalis violacea

In swamp

Callitriche palustris

Buckbean

Viola

Salix discolor fr.

"

"

"

"

In woods E. side,

Urtica

Viola pubescens

Polygonum

Quercus

"

more rocky
ellipsoidalis

On open places above
Cliff - W. side.

Astragalus caryocarpus

Anemone patens, var. fr.

Salix humilis fr.

Amelanchier oblongifolia much

Returned at 11 am.
after dinner took
train (late) at 3⁰⁰ PM.
for Spirit Lake via
Spencer.

May 27, 1917 Sunt

Left at 6¹² am. & drove
to Lab.

At first butchle S. of turn
W. of Edwards' farm
a lot of *Rammulus*
multispinosus.

Pachylus

Astragalinus canyoni

Castilleja similis

Vicia pedunculata

Comandra umbellata

Aithya americana

all fine.

at Lab

Dormitory O.K.

Two pots at W. gate back

Pier in good shape - 1 pile on
N. side pulled up some.

Boathouse O.K.

Steps to pier O.K.

Roof on ice house.

10 ft. x 12 = 120 sq ft. of
roofing.

Mr. Livingston hauled the ice
E. door ganged out (pushed out)

Gates N & S. left open much
stock comes in.

Mr. Livingston suggests step
put in

Pump in fair shape.

Sawmills 2 ice spade.

Rake 2 shovels

Axle 1 shovel

Crowbar - 1 pickaxe

Sledge hammer. Post hole digger

Roof evidently leaks
badly on S. side, entrance
lab. 1

2 dredges - 2 pole handle

Mrs. Livingston's things

20-25 posts.

Cash - N. side

Roof on Mrs. corner over
Zetor's lab. sealed (open
anchors)

Hotel & room

3 packages of exam. paper,
1000 napkins

Alarm clock

Trays & red light

Alcohol a couple of gallons?
& bottles

Als. also 4 bottles

Sodium Bisulph

Cyanide of Pot. a lot

Chromic acid a lot

Kerosene can in my old shed

Small lot (4 bottles) of formalin

A couple of gallons in can
formalin - needs filtering

Box of crayon - few
colored crayons - short
box

Key to office door

Piece of roofing 3x4 ft. cut
snipped off on W. end
of N. side of lab.

Ponds all full. Rains
of past two days are
said to have raised
lakes 9 in. deep!

Found *Lithospermum angustifolium*
Yucca pedatifida, *Prosopis juliflora*
Agave, *Pedicularis*,
Lithospermum canescens &
much *Astragalus*
caryocarpus in flower
on trip
around lower end of
W. Lake.

Took fls. of my Red Oak
4 at Arnold's Park.

Reached Arnold's Park
at 2³⁰. In woods
much *Phlox divaricata*
& some *Geranium*
maculatum.

Reached Spirit Lake
at 3 P.M. & left
at 4¹⁵ P.M.

N. of West Bend very
much *Pedicularis*
canescens along RR.

Add to Okoboji list:

Cotton grass

Ranunculus multiflorus

Big reed (?)

Changes in road list

Andromeda } usually n
Onion } sand

Wells - plates -

1. Lake beach & river bars
2. Harrison's sand dunes
3. " " "
4. Big mound
- 5.

Okolopi - June 7, 1917

Left Iowa City at 9³⁰ PM.
with Folda. Failed to get
berth & sat up in chair
car. Awakened often by a
bundle of chattering women and
a how sick baby.

Friday June 8 - 1917

Day fine.

Just beyond West Bend I
saw the low

Baptisia bracteata
in flower

Drove from Spirit Lake
across head of W. Okolopi.

Found *Lepus minor* in
mound at Edwards.

On dry knob E. of Methodist
Tabernacle farm.

<i>Oxalis violacea</i>	<i>Sisyrinchia</i>
<i>Vicia pedatifida</i>	
<i>Rehmannia cuneata</i>	
" <i>longistylis</i>	

On foot S. of turn,
W. of Edwards Rammels
multifidum was still plentiful.
On prairie S. saw fine
Castilleja nivalis Oxalis violacea
Viola pedatifida Astragalus caryocarpus
Podium sp. -

On wet prairie - Cyrtanthus to
Viola -
Oxalis violacea
Senecio -
Hypoxis.

Cyrtanthus in fl.
Eriophorum along stream flowing.

Reached the Lab. about
noon.

Afternoon looked over
repairs & then went
to Elmer Creek woods
collected a few
prairie plants in the

cleared "streets".
In woods few flowers.
Osmorhiza
Hydrophyllum
Pteris aquilina
Cyrtanthus - fine several

went to Mill Pt. & found
a few plants.
Much water, lake
higher than ever.
Slept in cottage.

June 9, 1917

Drove to Montgomery,
Orealis violacea exceedingly
 abundant in flower.

Drove back in round-
 about way & mapped
 ponds.

Returned at 1²⁰ PM.

Fixed horses & drove
 west.

At 3 PM. started for the
 Little Sioux via E. & W. road
 north of Lab. (past school)

Had accident with horses &
 just got a little *M. sp.*
 in fruit, - then drove to Lusk.

Pedicularis canadensis

Lithospermum canescens

Both very abundant, as
 was *Astragalus caryocarpus*.

Spent evening in changing
 drivers.

June 10, 1917

Spent morning in looking
 over repairs, etc., & in changing
 drivers.

Left at about 10 AM &
 drove around lower end of
 lake. Did some mapping
 en route.

Found lots of *Wolffia* & an
 Alga in Green Slough, right
 along road.

Big Buffaloes were abundant
 here. The slough was very
 full.

Lithospermum angustifolium was
 abundant. On prairie S-
 of mail box

also saw some *Viola pedatifida*,
Gizia aspera (infl.), *Astragalus*,
caryocarpus, locally *Pedicularis*
canadensis very common.

In flower along RR
W. of Spirit Lake, high prairie

Viola pedatifida
Lithospermum canescens

Sisymbrium
Lithospermum ^{abundant} ~~abundant~~ *viridula*

Poa pratensis RR & pr.

Anemone patens fr.

Vicia americana

Lathyrus venosus - fr.

Antennaria ^{neg.} ~~neg.~~ ^(?) *neglecta* fr.

Comandra umbellata

Hemlockia stricta

Podagracea canadensis

Senecio phytolaccoides

Anemone canescens } low

Erigeron philadelphicus } - also high

Thalictrum dasycarpum fr.

Oxalis violacea

Danthonia (?) (grass)

Carex *verticillata*

Pyrola — RR.

Poa compressa

Sisymbrium canescens RR

Galium boreale fr.

Ellisia nudicaulis RR

Erigeron annuus

Oxybaphus *neglecta* RR

Scrophularia *apocynifolia* RR

Barbarea RR

Camelina RR

Tradescantia virginiana RR

Caprilla *borealis* RR

Sisymbrium officinalis RR

Mason City - Expenses -

June 16, 1917 -
 R.R. to Cedar Rapids . 00
 R.R. to Mason City 2.83
 sleeper 1.50

June 16, 1917 - Mason City
 Left for Cedar Rapids
 at 10³⁰ PM.

June 17, 1917

Took C & M for Mason City.
 Cold yesterday & today

June 18, 1917

Morning bright.
 Near Mason City on prairie
Phlox pilosa in at best, &
 many are white.
Lithospermum canescens passing out.
Hypericis vivante - good.
Senecio glaberrimus ? "

In upland woods W. of Long
mostly *Q. ellipsoides*?

& *Q. macrocarpa*. *Lonicera* (no)

Also *Opulus tremuloides*

Crab, Red Oak, Choke

Cherry, wild Plum, wild Cherry,

Rosa blanda, Cornus paniculata, Hazel

collected a bunch of

plants, including

Asplenium & *Cypripedium*

On the W. side bluffs:

Viburnum dentatum Red Cedar, pine.

Ostrya Red Oak

Quercus *Lonicera* *Rhus*

Wild Black Cherry Choke Cherry

Staphylea, *Cornus alternifolia*

Green Ash. *Betula*

Ribes cynosbati *Ribes floridum*

Plum glabra

Lonicera sempervirens

On rocky slopes, W. (S.) side.

Chamaenerion. *Asplenium*

Cryptogramma *Hieracium*

Cystopteris bulbifera

On wooded rocky bank, W. side

Asplenium

Phlox divaricata

Arctostaphylos

Ribes floridum

From:

Cardamine hirsuta

Stellaria longifolia

Carex

Equisetum

Eriophorum (gracile? small one)

Carex

Rocky Banks - E. side -

Phytolacca

Bur oak

Black Cherry

Choke v

Hazel

Sumach

Red Elm

Cornus paniculata

Box Elder

Yellow Lonicera

Wild Plum

Amelanchier

Prunus pennsylvanica

Viburnum dentatum

Crataegus commutata (bud)

Amelanchier (mistle)

Crataegus mollis (through)

Crab.

Rac. Bladder

Ribes floricolum

Celastrus scandens

Passerowd

Red Symplocar

Collinson

1917

June, (23 - street)

elm

Am. elm

elm

Red Elm

acer

Hard maple

sugar

Black Walnut

acer

Soft maple

Lilia

Tulip

Populus

Cottonwood

Aster

Ohio Buckeye

Gleditsia

Honey Locust

10 Shell-bark

Horse-chestnut

Catalpa (fig)

Eu. Basswood

Box Elder

15 Hackberry

Black Locust

Blue Spruce

Ald. Cherry

Green Ash

20 Chestnut

White Mulberry

Junco berry

Scotch Pine

Alder Vine

25 White Birch

Sycamore

Catalpa

Red Cedar

White Oak

30 Red Oak

Eu. Larch

Black Birch

White Pine

Cut low Birch

35 Wild Olive

Mex. Ash

Chinese Elm / Pear

White Spruce

Norway Spruce

40 Austrian Pine

Red-bud

Crab

Peach

Prostrate Juniper

45 Tamarack

Wilton & Moscow
June 28, 1912

Sand flora at Moscow.

Asclepias incarnata

Cyperus Schenckii

Epidium apellatum

Veronica cotula

Plantago aristata

Veronica stricta

Crucifera

Oralis stricta

Hordeum jubatum

(Lycium)

Achillea millefolium

Sisymbrium album

Rubus glaucus

Asclepias verticillata (L.)

Hieracium hirsutum

Panicum Scribnerianum

Festuca ovina

Monarda punctata

Erigeron annuus

Sporobolus vaginatus (L.)

Silene aconitifolia

Lupinus albus (L.)

Erigeron canadensis
Equisetum (juv)
25 Equisetum laevigatum
" arvense
Hordeum jubatum
Capsella -
Potentilla canadensis
Juniperus -
Artemisia ludoviciana
- ?
Cirsium discolor
Euphorbia corollata
Verbena stricta
36 Carex lasiocarpa
Salsola vermiculata
Thysanotus bipectinatus
Geranium carolinianum
P. Thysanotus parviflorus
Clematis vitalba
Rhus copallina
Phacelia grandiflora
Tridax virginiana
Spartanum (coarctatum)
Lithospermum

Oxyphlos rufus
~~Andropogon~~
Carex grandis (?)
50 Bromus floridanus (mutus)
Equisetum arvense
Xanthoxylum
Aster (truncatus)
Euphorbia heterophylla (L.)
55 Polypodium virginicum
Euphorbia corollata L.
Thysanotus parviflorus
Convolvulus sepium
Poa compressa
60 Asclepias tuberosa ^{umbellata}
Panicum capillare (L.)
Amaranthus retrofractus (L.)
Carex -
Lactuca scariola
65 - " ludoviciana
Amaranthus tripartitus
Equisetum laevigatum
Eleusine indica
Cannabis ^{sativa} (L.)
70 - Ornithoglossum virginicum

71 - *Pentstemon* *gracilis*

Asclepias tuberosa

Helianthus

Oenothera biennis

75 *Viola*

Verbascum

Mullein

Kochia *cristata*

Eragrostis pectinacea var

Speechnum perfoliatum

Homestead - July 1917

went through woods N.

Brickyard *prairie*

Solidago canadensis lf

Helianthus giganteus lf

Cyperus tenuis lf

Rumex crispus fl

Liatris pycnostachya tw.

Carex festucacea fr.

Aster multiflorus lf

Solidago rigida lf

Apocynum cannabinum fl

Pycnanthemum flexuosum tw.

Tradescantia virginiana (mostly) fl

Potentilla canadensis - lf

Euphorbia corollata lf

Lobelia spicata fl.

14 Achillea millefolium fl.
 Prunella virginica fl.
 Antennaria plantaginifolia fl.
 Panicum (fine) fl.
 Junonia tenax fr.
 Baptisia (mud) fl.
 Lepachya capitata fl.
 Rudbeckia subtorta fl.
 " hirta fl.
 Parthenium integrifolium fl.
 26 Galphium integrifolium fl.

CHARG.

Amaranthus Javanicus
 Lepachya capitata
 Euphorbia corollata
 Physalis peruviana
 Eryngium yuccifolium
 Erigeron annuus
 Rudbeckia subtorta
 " hirta
 Desmodium illinoense
 18 Koeberia cristata
 Rosa pratincola
 Viola pedunculata
 Panicum perfoliatum
 Poa pratensis
 Pradocentris bracteata
 Achillea
 Helianthus annuus
 Amaranthus annuus
 Carex festucacea
 20 Lycopodium flexuosum
 Potentilla canadensis
 Comarostaphylis repens
 Lobelia spicata
 25 Senecio jacobina

26 - *Anemone hepatica*

Gentiana

Anemone nemorosa

Artemisia ludoviciana

30 - *Asclepias syriaca*

Epipactis atrorubens

Pentstemon digitalis

Asclepias tuberosa

Asclepias speciosa

35 - *Lupinus perennis*

Elgona canadensis

Helianthus scaberrimus

Baptisia bracteata (Lam.)

Delphinium ajacis

40 - *Asclepias verticillata*

Thalictrum flavum

Solidago canadensis

Hesperis matronalis

Oxalis filipes

45 *Asclepias tuberosa*

Senecio canadensis

Rudbeckia hirta

Along road

Lilium philadelphicum

Stipa spicata

Erigeron annuus

Rudbeckia hirta

Achillea

Euphorbia corollata

Liatris pycnostachya

Rumex crispus

Kuhnia crispa

Artemisia canadensis (?)

Rumex crispus

Helianthus scaberrimus

Tridax procumbens

Hemlock

15 *Oxalis filipes*

Monarda glabra

Salix humilis

Helix

Silene integrifolia

Anemone hepatica

Lupinus perennis

Lupinus perennis

Solidago nemoralis var.

24 *Poa pratensis*
Asclepias tuberosa
Antennaria plantaginifolia fl.
Anemone cylindrica
Crepis palustris
Comandra umbellata

30 *Camilla annua* lin.
Solidago nemoralis fl.
Plantago ag.

Hardium patens
Carex festucacea

35 *Crucifera trifida* fl.
Achillea millefolium fl.
Brassica (var. capitata) fl.
Potentilla canadensis

Lepachys pinnata fl.
 40 *Rubus mollis* fl.
Lobelia spicata

Parthenium integrifolium
Erigeron annuus fl.
Eragrostis sp.

45 *Asclepias syriaca* fl.
Lactuca ludoviciana fl.
Lepidoptera sp.

48 *Sparganium* fl.
Helianthus annuus fl.
Liatris pycnostachya

Eldora Ia to Standard Rock

July 31, 1917

Bluffs (winds) near center

Hard Maple, very com

~~Fraxinus~~

~~Black Ash~~

~~White Birch~~

~~Carpinus (lun)~~

~~Red elm~~

~~Garrya~~

~~Douglas~~

~~Prunus pennsylvanica~~

~~Ostrya~~

(In deep woods almost no
lichen on trees)

~~Juglans~~

~~Walnut (lun)~~

~~Quercus~~

~~Red Oak~~

~~Spontaneous~~

~~Pitchy Ash~~

~~Sambucus canadensis~~

~~Elderberry~~

~~Crataegus (?) see below~~

~~Prunus~~

~~American low down~~

~~Red~~

~~Black Elder~~

~~Salix~~

~~Willow~~

~~Cornus alternifolia~~

~~Ribes cynosbati~~

~~Prunus serotina~~

P. S. - IF

Rubus occidentalis } along
Rham. laloni } road.

In low part above bridge
(w. side) I saw many young
Polyg. profunda & some
Aralium ovalis clinging to
broad leaved plants like

Rubus occidentalis, Eupatorium

maculatum, Aster dumosus,

Helianthus (narrow leaved)

Phytolacca on Red Elm that

Salix amygdaloides (low)

Soft maple (low)

Green ash (low)

Populus tremuloides

This is 4th hot day, & plants
are beginning to show it.

In deeper woods - winter plant

about now

^{Lappula}
Nette (low)

Campanula americana

Silphium perfoliatum

Heracleum

Helianthus (narrow leaved)

Chenopodium hybridum

Eupatorium (hale)

Eupatorium integrifolium
all leaves look flabby,
especially in open.

Day is clear, hot & windy

Heracleum is very common
in deep woods & bottomland just
at foot of slope. In fruit.

Ranunculus

Vitis vulpina

Salix nigra (low)

N. of bridge there is an
irregular gravelly terrace
which runs back to, at
least to turn in road.

The bottom is flat for a
short distance & then terrace
(with gravel pit at edge) rises
abruptly. Two houses
are in it & seem ruin.

Everything on open part of
this terrace is burnt
dry. There is still

some timber, & evidently
most of it (if not all)
was timbered.

Below bridge, bluffs
are rough, almost cliffs
with a few white pine
with saving for peak
all lvs. in open trees
& all, more in low hills.

Bluffs above bridge
partly (mostly) cleared.

The sloping bluffs on E.
side of terrace (see map)
are covered with mostly
light boulders (downy)
All these slopes are now
brown.

N.W. wind has been
blowing, this is fourth
day.

Corn lvs. rolled up &
cut. sunflowers wilted.

Actinidia & other Xerophytes

on open terrace are dead &
dying & grass is almost
all brown.

Bowdoin on the slopes
are very numerous, but
lichens very few.
(see spec.)

A few Verbena stricta in
flower (shrub & willow)
are the only plants that
seem to hold out on these
slopes.

This is now mostly blue grass,
pasture. Now dead.

On top of hill N. are a
good many hard rocks.
Those at edge have leaves
on S (- slo) scorched, those
on N. better.
Trees deeper in woods are
green.

At fence took a lot
of plants, those not
taken:

Buttercup
White fruit

On Oak knob above
firm cliffs:

Achillea
Rudbeckia hirta
Lepidium apetalum
Aster multiflorus
Aster laevis
Verbena stricta
Asclepias speciosa
Monarda mollis
Verbena hastata
Verbascum
Eriogonum ramosum

Opalis stricta
Asclepias
Hedera helix

Clear view
Red Oak
Crataegus mollis

Achillea millefolium
Aster multiflorus
Aster laevis
Asclepias speciosa
Crataegus mollis (no spec.)
Eriogonum ramosum
Hedera helix
Lepidium apetalum
Monarda mollis
Opalis stricta
Quercus rubra, (no spec.)
Rudbeckia hirta
Verbascum thapsus
Verbena hastata
" stricta

Allamakee co. - Aug. 11-1917

Left Saturday morning at 6¹⁵ & went to Postville. Reached it about 12¹⁵ & found that Mr. Orr was delayed by accident. Left Postville at 3⁴⁵ P.M. & followed the auto road (West Union & Wagon Road) through Post & Laddow townships.

Examined cuts along road. Cut this between sec. 20 &

21, Post Twp. It is a long cut over a well, sloping down ^{more} to N.

Cut 1 - Low - about 7 ft cut on well.

Nearly all yellow loam. Change in about 1 ft.

Took samples 1 - 3 & 8 ft. below top.

A little further N. the gray loam loam, very gray with few large tubules of iron, is much sharper.

set off - was a little rusty transition

Uppermost part is dark brown & lobular.

This cut is 600-700 ft long

Still further N. on slope down, ferritic & bouldery

light show below

Loam quite sharp.

Here cut about 8 ft deep & about 2 ft ferritic & sharp.

The gray loam is likely to be less abundant

Some of the boulders are striated. Dark boulders

& more widely quartz.

The gray loam runs out & yellow becomes thinner north.

See dark flinty pebbles still further down. The 5 ft. petkinon chert is exposed.

about 2 3/4 mi. N. of
Co. line.
NW 1/4 of sec. 10
not pasture (some trees
in it)

Hawthorn	Wh. oak
Burnwood	Red elm
Red oak	
Big tree	
Osage	
Adiantum	
Blowroot	
Asplenium	
Thalictrum	
Prunella	
Asplenium	
Aralia	
Galium (close to top)	
Geranium	
Trifolium	
Demodora	
Cryptotaenia	
Podophyllum	

Butterfly	
Delphinium	
Campanula	(large)
Rudbeckia	
(Trichostema	on yellow river)
"	(large)
Impatiens	
Rubus	
Blackberry	(?)
Vitis	incultus (?)
Hystrix	
Bromus	(smooth)
Osmunda	
Circaea	
Osmunda	
Pteris	
Corylus	
(habitat on yellow river)
Aquilegia	
Campanula	
Phlox	
Pyrola	
Impatiens	

Celestium
Impatiens fulva
Ment
Urtica dioica
(Dentaria binnata)
Aquaria
Populus tremuloides
Walnut
(Cork Elm)
Ranunculus
Berberis

Cut 2 (see map) shows
 a deep (4-5 ft) fracture
 zone & on it red loam
 like clay - redder below
 + hard & jointed
~~a red layer~~, somewhat
 (see spec)

Easternmost part of
 ship.

Cut 3 (see map & sample)
 is about 6 ft high
 Shows deeper rock below
 (rock fragments & a sort of
 clay - yellowish) & on it
 a very red layer which
 grades up into yellow
 stuff, but still not like
 loam.

Took sample 3 ft
 below top.

Took another sample
 1 ft from base in
 dark layer.

This country between
 Portville & Waukon is
 rolling (not excessively) (yellow)
 excepting along the river
 where it is rough, with
 rocky ledges.

Ludlow & Jefferson Twp
 & Union Prairie Mts, have
 many sink-holes. Each

of those that I noticed
shows a bunch of trees
or brush. According
to Mr. Orr, the largest
number

Mr. Orr says the loess
on the uplands has
no fossils, and that it
is in thickness from
2 or 3 ft. to 15 or 20.
This may include stuff
which is not loess.

It appears to me that
most of this upland stuff
is too red, too hard, &
too "columnar" or jointed, for
loess. Is most of this
decomposed old drift?
Or less likely, gneiss?

Is this what has become
of the old drift?

The absence of fossils

from most of this loess
is probably due to the
fact that the upland
wards in this part have
few mounds. After some
work in the undisturbed
wards (never cut and
never pastured) north
of Portville (3 mi. N.) I

found the following:

Polygona alabamica - few

Pyramidula alabamica - few, small

Helicodiscus parvulus - several

Carychium - 3

Circumaria cuneata - 2

Why are snails almost
absent in these otherwise
promising wards?

Mr. Orr says the

Beaked Hazel occurs

near Yellow river in Portville

& there is a clump of

native Balsam Fir on

S. side of Yellow river in

no. 4, no. 11, no. 12, no. 13-14-15-16
There are 25 to 50 trees, &
the only location in the
county. Only on Galena
Traverse limestone (This
is same as Bluffton)

The Beakrock is in
sec. 34 (near road in SW part)
sec. 34-976 (Keweenaw)

They are also W. of the
Galena Bluff.

The juniper grows only on
Orester limestone.

See pink-like area
marked on map by Mr. Orr.

Aug. 12, 1917

Rained all forenoon.
Started out after dinner
on red road to Lansing, but
turned N. on smaller red
road through center of
French Creek Twp.

Stopped in little old
Cemetery 2 mi. N. of Waukon,
in N. part of sec. 18, and
collected quite a number
of prairie plants,
with them grew short
Asarum claytonii &
Asplenium filix-foemina
(see spec. of all)

This is a bit of native
upland prairie.

Mr. Orr says *Lilium philadelphicum*
grows in the cemetery.

In the S. part of sec. 33
French cr. Twp. The road runs
along ridge, & west of it there
is a rocky ledge, with

St. Peter sandstone exposures,
this I called "Juniper bluff".
Juniper communis & possibly
J. rabiniana grow here.

Also collected several prairie
plants on bare place above
rock ledges (see spec.) & also
lichen & mosses on the sandstone.
In the north part of sec. 28
of same Twp., on E. side of
road, high up, were
low exposures of St. Peter's
sandstone, with many mosses
& lichens. (see spec.)

Poa compressa is also very
common above the low
ledges. (see spec.)

Rained more & more.

In the north west 1/4 of
sec. 2 we descended a
long hill to river
valley. (Upper Iowa)

The woods here are dense.

Quite low down, on a sort
of irregular terrace, the
road cuts into fossiliferous
loess. (Numbers are ~~revised~~ ^{not in}
order in which I studied
them.)

(No) This is on N.W. side of
road where it joins other
road at foot of hill.

The loess is yellow & has
shells scattered through it,
lime nodules, some rather
large & many small ones,
are scattered through it.

See sample of loess &
shells. Sample taken
from fossiliferous part about
5 ft. from base, & 3 or 4 ft
from top.

(A) A little higher up,
the road ascending gradually
(possibly 10 or 15 ft?). A bank
along N.W. side of road.
Fossils scattered through to

at least 6 or 7 ft. above
base. Boulders are on
bank here, probably
from below loss in
graveling. 2 or 3 boulders
were noticed.

Collected shells & took
sample.

(C) - Still higher, - 5 or
6 ft. higher. Another
part of same bank
see shells & sample

(d) - still higher, - may
be 5 or 6 ft. see
shells & sample of
clay.

This loss is yellow.
cuts b, c, d, show
few nodules mostly
quite small.

Fossils were most
abundant at (c).

Occasional blue-gray
spots or lines occur
in lower part.

After we crossed river
in N. part of sec 35,
E. of road, I collected
a number of prairie
plants on bare hillside.
This region is very rugged -
"the Switzerland of Iowa".
Fine all the way to

New Albin.

There are numerous
terraces, with many
Indian skeletons. Saw
some

About $\frac{1}{2}$ way to New Albin
we saw in sand bank
several Indian skulls
& skeletons.

Collected Monarda, etc
here. Much Monarda
pinnatifida where sandy.

Put up at Mrs. Hart's
at New Albion.
arranged plants, etc.

1917
Aug. 13. Monday
cloudy & wet.
We walked along the
C. & N. P. R.R. South of
New Albion for nearly
two miles.
collected prairie plants
along R.R. This is bottom-
land, but a little higher.

A piece of the original
bottom prairie lies just
S. of cut off lake before
you come to ^{upper} Iron riv.

2 mi. S. of Albion
It shows *Dactylis*
virgata & *Andropogon*
freely dominant, with
the following:

Silphium perfoliatum
Spartina, *Solidago*
menziesii, *Sell* *can*
Rumex, *Eriogonum*,
Oenothera, *Linum*
Cornus, *Salix*
Asclepias syriaca
Rosa blanda, *Cnicus*,
Elymus,

Went to river & on E. side
found that alluvium
had been washed out
in fields & quantities
of shells were exposed.
See two boxes.

Then went to big bench on
E. side, extending almost to
burial place in sec 20, &

found a few clam
shells (one open)
above burial ground
collected lichen on rock,
also *Peltaria alpestris*.

In burial place they
exhumed this morning three
skeletons & buried pots,
each with a clam shell
spoon in it.

Perognathus small *U. vari-*
varian, *U. alatus* -
U. griseus.



They notched
them like this.
Evidently spoons.

Stopped at bare hillside

and I climbed up.

Took me get of plants
from lower half & some
from upper.

At top I found *Asplenium*
platyneuron dominant & a
good many *A. platyneuron*,
Liatris scariosa (not below).

Amorpha canescens, *Corydalis*
palustris, *Verbascum*
occidentale, *Asclepias*
perfoliata, *Epilobium* *collata*,
Aristida canescens, *Polemon*
parviflorus, *Lupinus* *albus*,
Lotus *stipularis*, *Portulaca*
anagallis, *Vitis* *rupestris*.

Helianthemum (near trees)
Verbena stricta

Castilleja grandiflora
Lupinus albus (near trees)
Solidago nemoralis - Rapa (H)
Campanula rotundifolia
Aster laevis, Petalostemum
canadense (in trees), Kerria
The bluffs are rocky (limestone)
with almost no soil.
True prairie, plants
stunted, especially
upward.

The forest above is
Bur oak, Canada Quaking aspen,
Hickory, Hazel.

Look photos 3 & 4 looking
back along road from
cross road near Mt. Hope (where
we turned yesterday)

On sec. 38 beyond Mt. Hope
there is lower terrace.

Cut one is lower one, yellow,
with streaks of sand in
lower part. On same

level further back (towards
Mt. Albion) there is sand below
it. Transition is rather abrupt.
Found a few fossils (see box)
+ some nodules.

Cut 2 is 15 ft. higher +
about 20 ft. below top
of terrace. Few fossils
+ also nodules, yellow.
These terraces all along
have been (+ sections
sand below).

Slopes in part had much
dead hemlock; about $\frac{1}{2}$
way up or a little more.
It is evident that hemlock
recedes as well as advances.
This looked a year or two old.

We drove on to next
bridge above + crossed the
river. The run on W.
side running up hill

is very sandy in lower
part (but running well up)
we had hard work getting
up, & finally broke down
on a hill 12 mi. out from
Wauhan.

Aug 14-1917

Left Waukon by auto at
7 am & reached Portville
at 8:05. Roads bad.

Left at 8:25.

S. of Portville - some
prairie along RR.

To Clermont, not very
promising.

Just below Clermont is
a terrace with sand-pit.
Look this up.

(Mrs. Lambie's yard, etc.)
^(all water tanks)

From below ^(all water tanks) Clermont to
Elgin we follow Turkey
river. This is rocky & a
fair ^{sized} stream. Valley
broad. Here & there bluffs
look promising.

Could be worked from
Elgin to best advantage.
Creek valley from Elgin
to Brainard.

There is considerable timber here,
on rather high bluffs.

Near Brainard a lot of
loess (fossils?) just before
we reach depot.

Walk from Brainard to
Elgin, - only 4 miles!
To West Union 6 mi. from
Brainard. Bluffs tough
& timbered along creek.

Valley narrow.

Loess exposure on slope
just before we reach
West Union.

Some loess beyond West
Union, along RR.

Then boulders begin -
soon enter Iowa.

Just before reaching
Independence - ^{prairie}
pines & swamps, before
crossing river, - hence on
side across from station side,
which is some distance away.

Much of RR right of
way is cut over.

Account - Monticello - Sabula

June 12 - Iowa City - Taxi	\$.25
RR. to Cedar Rapids	.86
RR. to Marion	.18
Lunch, Marion ¹⁰ 35	.45
Pd. by Dunlap. Taxi to Monticello	9.50
Lunch " phone	.30
June 13 - Dearborn Hotel, Marion	.75
Lunch (breakfast) "	.10
RR. Marion to Sabula	2.80
June 14 - RR. to Clinton	.54
" 15 Lafayette Hotel - room	2.50
Taxi -	.25
RR. to Davenport	1.13
Davenport breakfast ⁵⁰ dinner ⁷⁰	1.20
RR. to Iowa City	1.75

June 12 - 1919 - Monticello.
Left Iowa City at 3:40 PM
(1 1/2 hour late). When we
reached North Liberty another
car came down and we
backed off to Oakdale!
This caused me to miss
the C.M. - S.P. at Cedar Rapids.
Took car for Marion and
after much trouble, got
a man to taxi me by taxi
to Monticello, 30 miles,
for \$9.50.

Delivered commencement
address to class of '25.
Mr L. W. Dunlap, Supt.
Mr. Reed, president of Board.
Saw young Mr. & Mrs. Brainerd.
Also Dr. Wilkinson was here
on way to Anamosa.
Left after 11 & reached
Marion about 1 AM.
Put up at Dearborn Hotel.

June 13. 1919 - Fri. - Sabula.

Left Marion for Sabula

at 5:27 AM. Reached

Sabula at 8:35 AM.

White Rose Chapin 245, 07.8

at Sabula, Mrs. Ethel A.

Rebman, Worthy Matron

(Clinton, no. 65, Miss Bernie Finch)

Muscataine, June 17, 1919

Left at 2⁴⁷ PM

Taxi — .25

RR to Muscatine 1.35

June 18 - Breakfast .25

RR to Iowa City 1.35

\$ 3.20

Reached Muscatine at
4²⁰ & was met by

Supt E.D. Bradley,
the W. Patron.

Drove out to Country Club
(or golf Club?) & had
recreation.

At 8³⁰ we opened Chapter,
& it was hot!

Mrs. Orris called my
attention to letter from Eagle
Brook ^(Pollen) complaining that
daughter-in-law teaching
on Winterset was said

to be candidate for C. S.
That W. Matton Mrs. Focht
of Eagle Grove wrote a
derogatory letter to W. Matton
Mrs. Hamilton at Winterset,
which was shown about,
and which forced Mrs.
Porter's resignation as a
teacher in Winterset.

I am to receive news at Colfax
Tuesday, & come to Winterset
(if necessary) Wednesday.
Left Muscatine June 18, 1919
at 6 AM.

Weeds, Muscatine

~~Ornithoglossum - small, yellow~~

~~Hordium jubatum~~

~~Monarda ^{arvensis} ~~canadensis~~~~

~~Bryonia ^{test.} ~~frax.~~~~

~~Asclepias~~

~~Lactuca scariola~~

Iris variegata fl. large.

Prairie plants -

Muscatine to Summit, E. side.

(This is good prairie - timber type)

~~Oenothera muricata hairy, yellow, large fl.~~

~~Lilium philadelphicum (crest) fl.~~

~~Tridacna repens fl.~~

~~Rosa blanda ^{2, hairy} fl.~~

~~Erigeron ramosus fl.~~

~~Asclepias tuberosa fl.~~

~~Rudbeckia hirta fl.~~

~~Thalictrum dasycarpum fl.~~

~~Stipa spartea fr. & fl.~~

~~Vitis vulpina - lf & fr (green)~~

~~Rhus glabra lf~~

~~Hordium jubatum fl.~~

~~Corylus americana - lf & fr.~~

~~Prunella pallida fl.~~

~~Asclepias tuberosa fl.~~

~~Asclepias tuberosa - bud~~

~~Yucca americana fl. & fr white~~

~~Parthenocissus integrifolia fl. comp.~~

~~Rodolia viscaria fl.~~

~~Baptisia leucantha fl.~~

~~Cypripedium pubescens 1 fl. buds~~

~~Rosa pratincola fr.~~

E
 Eriogonum speciosum - bud
 Salix humilis lf.
 Silphium laciniatum lf. + fr.
 Pastinaca sativa
 Summit to Wilton

- Tradescantia reflexa fl.
- Thalictrum dasycarpum fl.
- Erigeron annuus fl.
- Lilium philadelphicum fl.
- Rosa pratincola fl.
- Achillea millefolium fl.
- Stipa spartea fr.
- Hordeum jubatum fl.
- Braineria pallida fl.
- Koeleria cristata fl.
- Poa fruticosa fr.
- Coreopsis palmata buds
- Silphium laciniatum lf.
- Rudbeckia hirta fl.
- Oxybaphus virginicus fl.
- Vitis vulpina lf.
- Hesperis hispida fl.
- Baptisia leucantha fl.
- Krigia amplexiflora fl. (old)
- Lobelia spicata fl.
- Phlox pilosa fl.
- Eryngium yuccifolium buds
- Knoten ^{variegata} large - yell.

Artemisia ludoviciana lf.
 Salix humilis lf.
 Anemone cylindrica fl.
 Caltha alba ^{wh. comp.} fl.
 Pastinaca sativa fl. + fr.
 (as above - next)
 Red corn
 White corn
 White corn

This is really a good
 piece of prairie - especially
 between Wilton & Summit,
 and should be worked.

Weeds at Wilton

Polygonum aviculare lf.
Portulaca campestris fl.
Trifolium repens fl.
 " *hybridum* fl.
Capsella bursa-pastoris fl.
Hordeum jubatum fl.
Zinnia officinale fl. & fr.
Melilotus alba lf. fl.
Plantago major lf. -
Asterium minus lf.
Trifolium pratense fl.
Sisymbrium officinale ^{large ones} fl.
Phleum pratense fl.
Veronica bracteosa fl.
Ammannia retrofracta lf.
Ambrosia artemisiifolia lf.
Lepidium virginicum fl.
Lactuca scariola lf. (cut her)
Eragrostis canadensis lf.
Poa pratensis fl. - fr.
Polygonum pennsylvanicum lf. fl.
 " *convolvulus* lf.
Rumex crispus fl.

Bromus tectorum fl.
Brachypodium pinnatifidum fl.
Sisymbrium altissimum lf. & fr.
Oxybaphus myrsinifolius fl.
Agrimonia eupatoria fl.
Veronica Thapsus lf.

June 18, 1919 Burlington

Left at 2⁴⁷ PM. Reached
Burlington at 6²⁰ PM.

Mrs. Eisenhardt's daughter
met us. Took dinner
with most of town office.

Put on work at night.

1st!!! Slept in Union Hotel

Left at 4⁴⁰ AM. Asked
for water twice at hotel
+ got none.

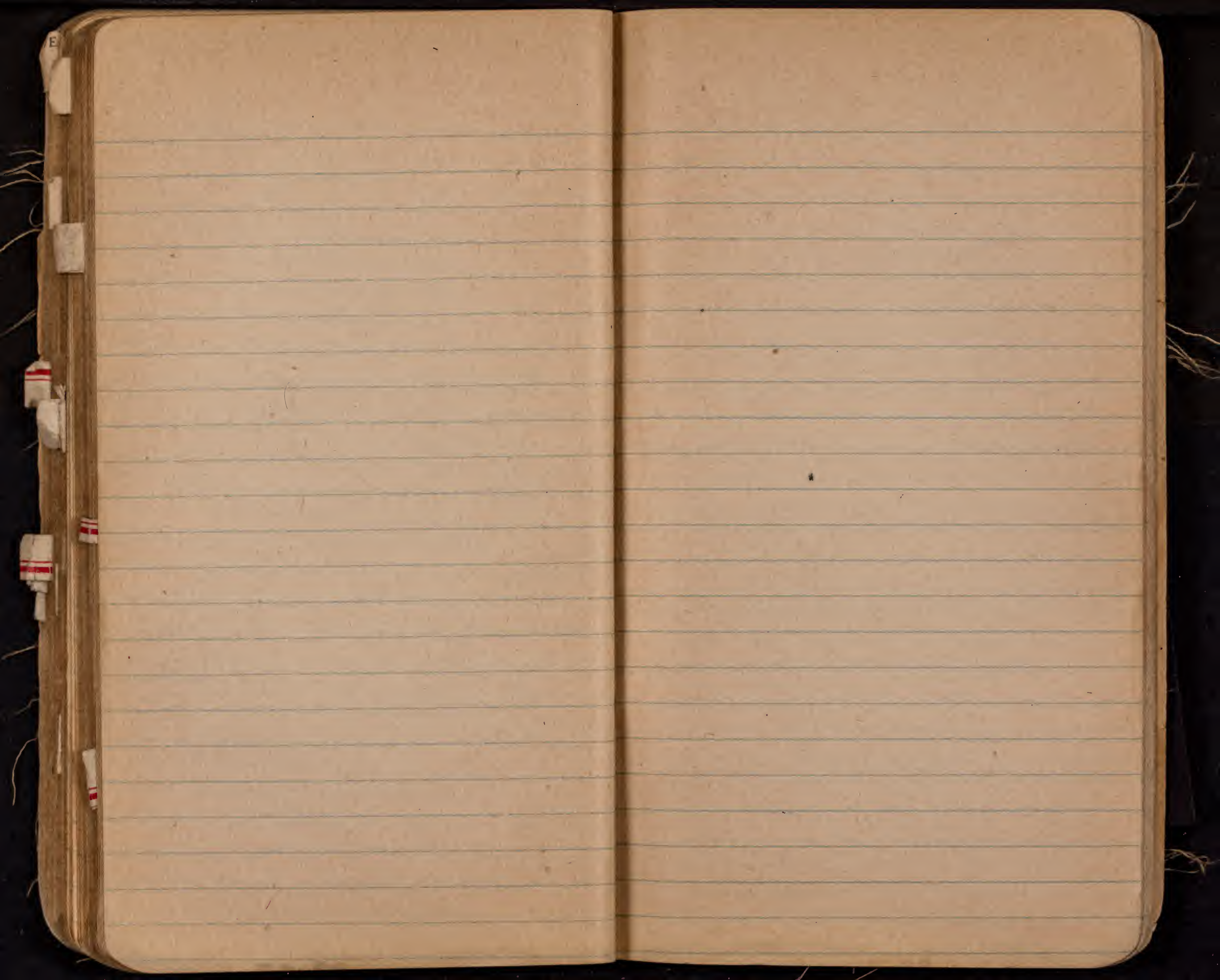
Taxi - Iowa City	.25
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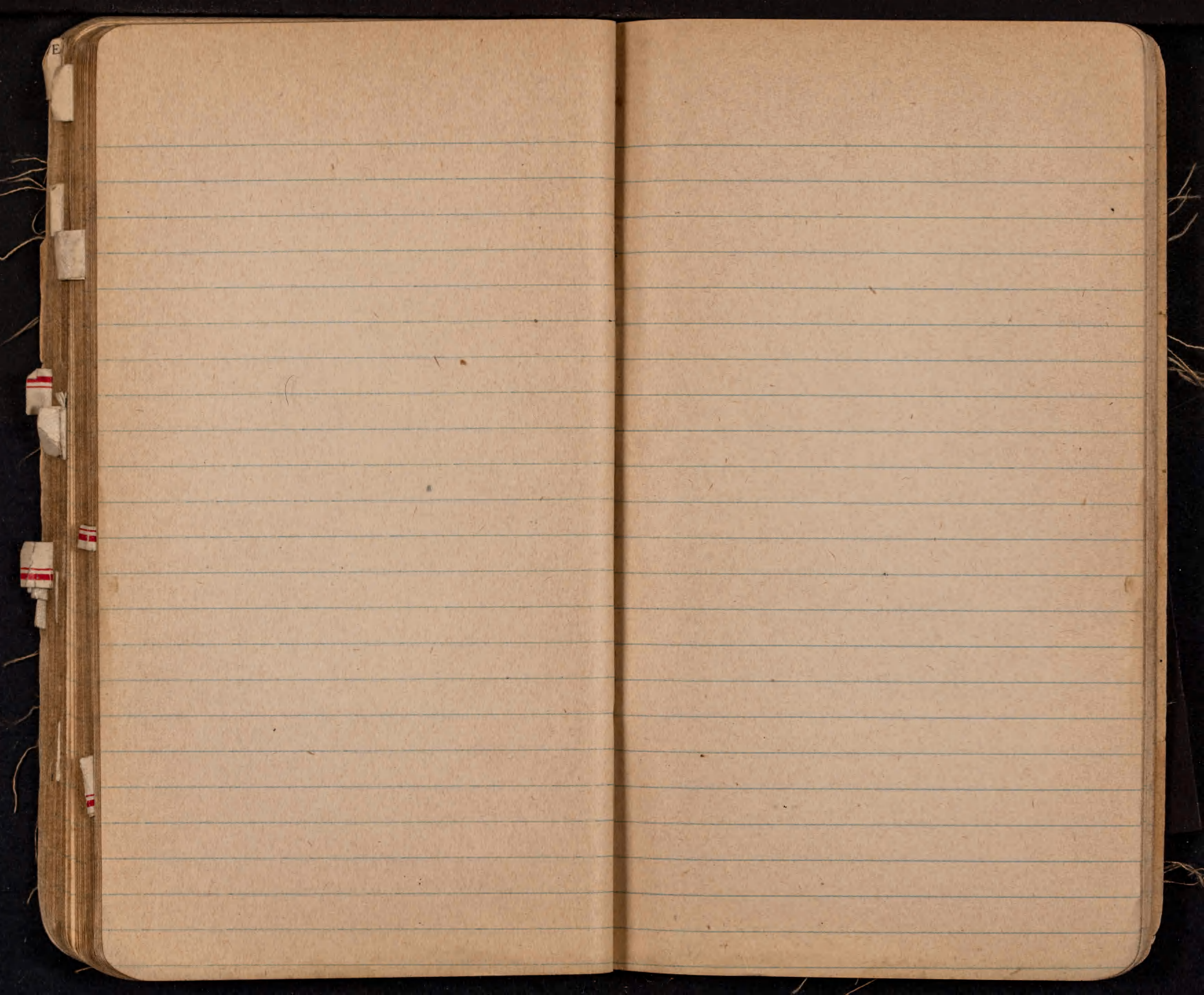
RR to Burlington	2.52
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Union Hotel - room	.75
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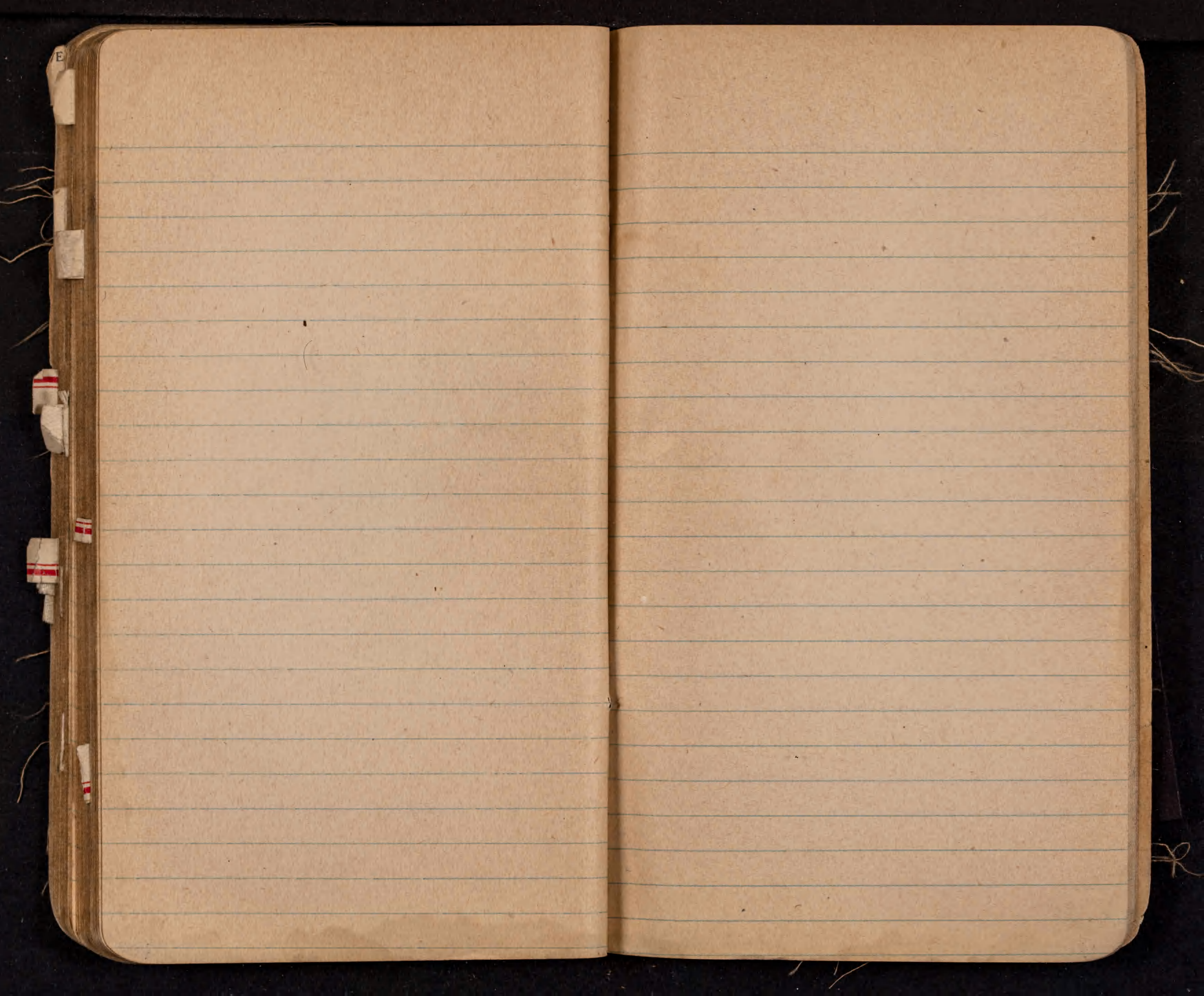
Breakfast - RR restaurant	.20
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RR to Iowa City	2.52
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Walk - estimate to lumber dealer by
4 - 2x12 x 12 ft. for walk

Fix platform
4x4 10 ft.

Fin shingles 6x8 in.
In harden stone
150 shingles

Repair steps E. side of
main cottage

See if porch floor needs
bracing.

12 ft. - 2x10 - 1.
for porch E. side Lab.

1 - 2x6 - 10 ft. - 1
for platform E. side Lab.

Servants cottage

Window pane - 26x10 - 1.
Putty & glazing paper.

Ice house -

Roof - 16 ft. x 8 for each half.
30 in width.

16	2 1/2	5 1/2	16.	16
	6	2		32
	12			16
	30			192
	15			180

2 1/2
40
80
20
108

16
16
96
16
256

108

Fix E. door.

Pier & steps

2 planks on pier - use

Drive ^{old ones} ~~plank~~ ^{over} ~~lower~~
Place rail - lower steps

Rail just E. of bathroom
Fix door to boat house.

Cottage

Weight New window in
Stephen's room

Fence

Steps - South -

2 - 12 ft. 2x10 - plank.

Steps N

Same.

Kitchen

Fix - slide at ice box

New window - W side

Fix coal box

Fix floor - S. side dining

For Lab. 1 width.

Roofing

S. side. 37 ft. long.

W. side (N.W.) 19 ft. long.

N. side 29 ft.

40 -

40

Fix N. side of basement.

Pile lumber on support.

Hook ^{up} N. side basement.

Pumpkin -

Fix staple on S. door.

Fix cur-rails - NE

Fence posts

N. side 17 1/2 (one at corner)

W. side ~~11~~ ~~11~~ ~~11~~ 1'

S. side ~~11~~ ~~11~~ 11

27 posts

4

- old poles

23 -

Old posts pulled up from tent floor

House Tent

Steps - E. side

Expense - Olathe - June 7-8-13
 Ticket Iowa City .25
 RR. to Cedar Rapids .50
 RR. to Spirit Lake 4.48
 Breakfast - dinner .75

Freight, Mountgem \$7.75
 25 pieces
 14 box 1 box bands etc
 2 tons & 2 boxes paper,

Expense to Portville 1917
 Warden - Aug 11-13
 RR. Iowa City & Elmer 20
 RR. Elmer to Portville 2.44
 Dinner - Hotel - Portville .60
 Hotel Allamakee, Warden
 Supper, Room, Breakfast 2.25
 dinner .60
 Hotel (Mrs. Hardy) New Albin 2.25 x 3 6.75
 Supp, Room, Breakfast, Lunch
 Hotel Allamakee Room & Breakfast 1.00
 Cheffman .00
 RR. Portville to Cedar Rapids 1.98
 To Iowa City 65.50
 \$16.82

Trip to Brighton, Ia.
May 25, 1917.

Taxi	.25
RR. to Fairfield	2.08
Bus	.15
RR. to Mason Co	3.86
Bus	.25
Car fare "	.05
RR. to Spirit Lake	2.42
Hotel - room	1.00
Supper - restaurant	.35
Breakfast "	.40
Team	3.50
RR. to Iowa City	5.54
Supper en route	.85

Franklin Flote

Shenandoah, Ia.

Miss Etta Smith

Gillett, Iowa, Ia.

wants to see him soon

for 3rd.

2.33

.15

2.05

4.53

